

Notice of Allowability

Application No.

10/501,807

Examiner

Jerry Martin Blevins

Applicant(s)

WALKER ET AL.

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 13 December 2005.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 09/12/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Brian Healy
Primary Examiner

DETAILED ACTION

Response to Arguments

Applicant's arguments, see pages 7-12, filed 12/13/2005, with respect to objection to specification, objection to claims 8 and 9, and rejection of claims 1-15, have been fully considered and are persuasive. The objection to specification and claims 8 and 9 and the rejection of claims 1-15 have been withdrawn.

Allowable Subject Matter

Claims 1-15 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the prior art, as best exemplified by British Published Patent Application to Walker, number GB2361071A, teaches a Mach-Zehnder interferometer modulator (Figure 1 and page 4, lines 10 and 11) for modulating a beam of laser light (page 1, line 20), the modulator comprising a pair of separate waveguides (Figure 1, elements 10 and 12) through which laser light is passed after splitting in a splitting zone (Figure 1, element 2) and after which the light is recombined in a merge zone (Figure 1, element 8), the waveguides being formed of a material having electro-optic properties (page 4, lines 14 and 15) and there being provided opposed pairs of electrodes (Figure 2, elements 40 and 42, where the dashed ovals represent the waveguides, and page 15, lines 10 and 11) electrically located so as to be able to effect optical changes within the material of the waveguides (page 10, lines 10-13), wherein the waveguides are

formed in a semiconductor material (page 7, lines 10 and 11) with one of the electrodes of each pair being formed in a doped layer (page 15, lines 13-15), said doped layer being of relatively high conductivity compared to the semiconductor material (page 15, line 14 teaches that the dopant is conductive), buried within or below the waveguide material (Figure 2 and page 15, line 14) whilst the other electrode, a top electrode, is a surface metalisation (page 15, lines 21 and 22). However, Walker does not teach that the doped layer is trenched so that adjacent electrodes in the doped layer are electrically isolated from one another so that one of the electrodes in the doped layer can be connected with a different electrical polarity to the other electrode in the doped layer thereby permitting the connection of the pairs of electrodes in parallel anti-phase mode. (Compare Figure 7 of present application, which teaches this limitation to Figure 5 of Walker, which does not teach this limitation). Furthermore, Walker, either alone or in combination with the prior art, neither discloses nor renders obvious that the doped layer is trenched so that adjacent electrodes in the doped layer are electrically isolated from one another so that one of the electrodes in the doped layer can be connected with a different electrical polarity to the other electrode in the doped layer thereby permitting the connection of the pairs of electrodes in parallel anti-phase mode.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB

A handwritten signature in black ink, appearing to read "Brian Healy". The signature is fluid and cursive, with the first name "Brian" and last name "Healy" clearly distinguishable.

Brian Healy
Primary Examiner